

IN THE CLAIMS

Please amend the claims as follows:

1. (Cancelled)
2. (**Currently Amended**) A method of stimulating [[an]] a CD8⁺ cytotoxic T cell immune response to an antigenic peptide *in vivo*, said method comprising:

contacting a cell an antigen presenting cell selected from a macrophage and a dendritic cell with said antigenic peptide and with a photosensitizing agent *ex vivo*, wherein said peptide and said agent are each taken up into an intracellular membrane-restricted compartment of said cell;

irradiating said cell *ex vivo* with light of a wavelength effective to activate the photosensitizing agent, such that the membrane of said intracellular compartment is disrupted, releasing said peptide into the cytosol of the cell, without killing the cell;

wherein said released antigenic peptide, or a part thereof of sufficient size to stimulate a cytotoxic T cell response, is subsequently presented on the surface of said cell by a class I MHC molecule;

administering the cell to a mammal after irradiating said cell to thereby stimulate the *in vivo* immune response to the antigenic peptide; and

wherein the photosensitizing agent is selected from the group consisting of a porphyrin, phthalocyanine and a chlorin.
3. (Cancelled).
4. (Previously Presented) The method of claim 2, wherein the antigenic peptide is a vaccine antigen or vaccine component.
- 5-7. (Cancelled).

8. (Previously Presented) The method of claim 2 wherein the photosensitizing agent is meso-tetraphenylporphine with 4 sulfonate groups (TPPS₄), meso-tetraphenylporphine with 2 sulfonate groups on adjacent phenyl rings (TPPS_{2a}), or aluminum phthalocyanine with 2 sulfonate groups on adjacent phenyl rings (AlPcS_{2a}).

9. (Previously Presented) The method of claim 2, wherein the antigenic peptide and/or photosensitizing agent is bound to one or more targeting agents or carrier molecules.

10 -27. (Canceled).

28. (Previously Presented) The method of claim 2, wherein at least 90% of the cells are not killed.

29. (Previously Presented) The method of claim 2, wherein at least 95% of the cells are not killed.

30. (Previously Presented) The method of claim 2, wherein the photosensitizing agent is a sulfonated tetraphenylporphine, a disulfonated aluminum phthalocyanine or a tetrasulfonated aluminum phthalocyanine.

31– 42. (Canceled).

43. (**Currently Amended**) A method of stimulating [[an]] a CD8⁺ cytotoxic T cell immune response to an antigenic peptide *in vivo*, said method comprising:

contacting a cell an antigen presenting cell selected from a macrophage and a dendritic cell in a patient with an antigenic peptide and with a photosensitizing agent *in vivo*, wherein said peptide and said agent are each taken up into an intracellular membrane-restricted compartment of said cell;

irradiating said cell with light of a wavelength effective to activate the photosensitizing agent, such that the membrane of said intracellular compartment is disrupted, releasing said peptide into the cytosol of the cell, without killing the cell;

wherein said released antigenic peptide, or a part thereof of sufficient size to stimulate a cytotoxic T cell response, is subsequently presented on the surface of said cell by a class I MHC molecule;

wherein presentation of the antigenic peptide, or part thereof, on the surface of said cell results in stimulation of the immune response specific for said antigenic peptide or a part thereof; and

wherein the photosensitizing agent is selected from the group consisting of a porphyrin, phthalocyanine and a chlorin.

44. (Previously Presented) The method of claim 43, wherein the antigenic peptide is a vaccine antigen or vaccine component.

45. (Previously Presented) The method of claim 43, wherein the photosensitizing agent is meso-tetraphenylporphine with 4 sulfonate groups (TPPS₄), meso-tetraphenylporphine with 2 sulfonate groups on adjacent phenyl rings (TPPS_{2a}), or aluminum phthalocyanine with 2 sulfonate groups on adjacent phenyl rings (AlPcS_{2a}).

46. (Previously Presented) The method of claim 43, wherein the antigenic peptide and/or photosensitizing agent is bound to one or more targeting agents or carrier molecules.

47. (Previously Presented) The method of claim 43, wherein at least 90% of the cells are not killed.

48. (Previously Presented) The method of claim 43, wherein at least 95% of the cells are not killed.

49. (Previously Presented) The method of claim 43, wherein the photosensitizing agent is a sulfonated tetraphenylporphine, a disulfonated aluminum phthalocyanine or a tetrasulfonated aluminum phthalocyanine.

50. (**Canceled**)

51. (**Canceled**)

52. (**Canceled**)